

least 80 percent of the trees and shrubs used to determine such success shall have been in place for 60 percent of the applicable minimum period of responsibility.

(iii) Vegetative ground cover shall not be less than that required to achieve the approved postmining land use.

(4) For areas to be developed for industrial, commercial, or residential use less than 2 years after regrading is completed, the vegetative ground cover shall not be less than that required to control erosion.

(5) For areas previously disturbed by mining that were not reclaimed to the requirements of this subchapter and that are remined or otherwise redisturbed by surface coal mining operations, as a minimum, the vegetative ground cover shall be not less than the ground cover existing before redisturbance and shall be adequate to control erosion.

(c)(1) The period of extended responsibility for successful revegetation shall begin after the last year of augmented seeding, fertilizing, irrigation, or other work, excluding husbandry practices that are approved by the regulatory authority in accordance with paragraph (c)(4) of this section.

(2) In areas of more than 26.0 inches of annual average precipitation, the period of responsibility shall continue for a period of not less than:

(i) Five full years, except as provided in paragraph (c)(2)(ii) of this section. The vegetation parameters identified in paragraph (b) of this section for grazing land, pasture land, or cropland shall equal or exceed the approved success standard during the growing season of any 2 years of the responsibility period, except the first year. Areas approved for the other uses identified in paragraph (b) of this section shall equal or exceed the applicable success standard during the growing season of the last year of the responsibility period.

(ii) Two full years for lands eligible for remining included in permits issued before September 30, 2004, or any renewals thereof. To the extent that the success standards are established by paragraph (b)(5) of this section, the lands shall equal or exceed the stand-

ards during the growing season of the last year of the responsibility period.

(3) In areas of 26.0 inches or less average annual precipitation, the period of responsibility shall continue for a period of not less than:

(i) Ten full years, except as provided in paragraph (c)(3)(ii) of this section. Vegetation parameters identified in paragraph (b) of this section shall equal or exceed the approved success standard for at least the last two consecutive years of the responsibility period.

(ii) Five full years for lands eligible for remining included in permits issued before September 30, 2004, or any renewals thereof. To the extent that the success standards are established by paragraph (b)(5) of this section, the lands shall equal or exceed the standards during the growing seasons of the last two consecutive years of the responsibility period.

(4) The regulatory authority may approve selective husbandry practices, excluding augmented seeding, fertilization, or irrigation, provided it obtains prior approval from the Director in accordance with §732.17 of this chapter that the practices are normal husbandry practices, without extending the period of responsibility for revegetation success and bond liability, if such practices can be expected to continue as part of the postmining land use or if discontinuance of the practices after the liability period expires will not reduce the probability of permanent revegetation success. Approved practices shall be normal husbandry practices within the region for unmined lands having land uses similar to the approved postmining land use of the disturbed area, including such practices as disease, pest, and vermin control; and any pruning, reseeding, and transplanting specifically necessitated by such actions.

[48 FR 40161, Sept. 2, 1983, as amended at 53 FR 34643, Sept. 7, 1988; 60 FR 58492, Nov. 27, 1995]

§817.121 Subsidence control.

(a) *Measures to prevent or minimize damage.* (1) The permittee must either adopt measures consistent with known technology that prevent subsidence from causing material damage to the

extent technologically and economically feasible, maximize mine stability, and maintain the value and reasonably foreseeable use of surface lands or adopt mining technology that provides for planned subsidence in a predictable and controlled manner.

(2) If a permittee employs mining technology that provides for planned subsidence in a predictable and controlled manner, the permittee must take necessary and prudent measures, consistent with the mining method employed, to minimize material damage to the extent technologically and economically feasible to non-commercial buildings and occupied residential dwellings and structures related thereto except that measures required to minimize material damage to such structures are not required if:

(i) The permittee has the written consent of their owners or

(ii) Unless the anticipated damage would constitute a threat to health or safety, the costs of such measures exceed the anticipated costs of repair.

(3) Nothing in this part prohibits the standard method of room-and-pillar mining.

(b) The operator shall comply with all provisions of the approved subsidence control plan prepared pursuant to § 784.20 of this chapter.

(c) *Repair of damage*—(1) *Repair of damage to surface lands*. The permittee must correct any material damage resulting from subsidence caused to surface lands, to the extent technologically and economically feasible, by restoring the land to a condition capable of maintaining the value and reasonably foreseeable uses that it was capable of supporting before subsidence damage.

(2) *Repair or compensation for damage to non-commercial buildings and dwellings and related structures*. The permittee must promptly repair, or compensate the owner for, material damage resulting from subsidence caused to any non-commercial building or occupied residential dwelling or structure related thereto that existed at the time of mining. If repair option is selected, the permittee must fully rehabilitate, restore or replace the damaged structure. If compensation is selected, the permittee must compensate

the owner of the damaged structure for the full amount of the decrease in value resulting from the subsidence-related damage. The permittee may provide compensation by the purchase, before mining, of a non-cancelable premium-prepaid insurance policy. The requirements of this paragraph apply only to subsidence-related damage caused by underground mining activities conducted after October 24, 1992.

(3) *Repair or compensation for damage to other structures*. The permittee must, to the extent required under applicable provisions of State law, either correct material damage resulting from subsidence caused to any structures or facilities not protected by paragraph (c)(2) of this section by repairing the damage or compensate the owner of the structures or facilities for the full amount of the decrease in value resulting from the subsidence. Repair of damage includes rehabilitation, restoration, or replacement of damaged structures or facilities. Compensation may be accomplished by the purchase before mining of a non-cancelable premium-prepaid insurance policy.

(4) *Rebuttable presumption of causation by subsidence*—(i) *Rebuttable presumption of causation for damage within angle of draw*. If damage to any non-commercial building or occupied residential dwelling or structure related thereto occurs as a result of earth movement within an area determined by projecting a specified angle of draw from the outermost boundary of any underground mine workings to the surface of the land, a rebuttable presumption exists that the permittee caused the damage. The presumption will normally apply to a 30-degree angle of draw. A State regulatory authority may amend its program to apply the presumption to a different angle of draw if the regulatory authority shows in writing that the angle has a more reasonable basis than the 30-degree angle of draw, based on geotechnical analysis of the factors affecting potential surface impacts of underground coal mining operations in the State.

(ii) *Approval of site-specific angle of draw*. A permittee or permit applicant may request that the presumption apply to an angle of draw different from that established in the regulatory

program. The regulatory authority may approve application of the presumption to a site-specific angle of draw different than that contained in the State or Federal program based on a site-specific analysis submitted by an applicant. To establish a site-specific angle of draw, an applicant must demonstrate and the regulatory authority must determine in writing that the proposed angle of draw has a more reasonable basis than the standard set forth in the State or Federal program, based on a site-specific geotechnical analysis of the potential surface impacts of the mining operation.

(iii) *No presumption where access for pre-subsidence survey is denied.* If the permittee was denied access to the land or property for the purpose of conducting the pre-subsidence survey in accordance with § 784.20(a) of this chapter, no rebuttable presumption will exist.

(iv) *Rebuttal of presumption.* The presumption will be rebutted if, for example, the evidence establishes that: The damage predated the mining in question; the damage was proximately caused by some other factor or factors and was not proximately caused by subsidence; or the damage occurred outside the surface area within which subsidence was actually caused by the mining in question.

(v) *Information to be considered in determination of causation.* In any determination whether damage to protected structures was caused by subsidence from underground mining, all relevant and reasonably available information will be considered by the regulatory authority.

(5) *Adjustment of bond amount for subsidence damage.* When subsidence-related material damage to land, structures or facilities protected under paragraphs (c)(1) through (c)(3) of this section occurs, or when contamination, diminution, or interruption to a water supply protected under § 817.41 (j) occurs, the regulatory authority must require the permittee to obtain additional performance bond in the amount of the estimated cost of the repairs if the permittee will be repairing, or in the amount of the decrease in value if the permittee will be compensating the owner, or in the amount of the esti-

mated cost to replace the protected water supply if the permittee will be replacing the water supply, until the repair, compensation, or replacement is completed. If repair, compensation, or replacement is completed within 90 days of the occurrence of damage, no additional bond is required. The regulatory authority may extend the 90-day time frame, but not to exceed one year, if the permittee demonstrates and the regulatory authority finds in writing that subsidence is not complete, that not all probable subsidence-related material damage has occurred to lands or protected structures, or that not all reasonably anticipated changes have occurred affecting the protected water supply, and that therefore it would be unreasonable to complete within 90 days the repair of the subsidence-related material damage to lands or protected structures, or the replacement of protected water supply.

(d) Underground mining activities shall not be conducted beneath or adjacent to (1) public buildings and facilities; (2) churches, schools, and hospitals; or (3) impoundments with a storage capacity of 20 acre-feet or more or bodies of water with a volume of 20 acre-feet or more, unless the subsidence control plan demonstrates that subsidence will not cause material damage to, or reduce the reasonably foreseeable use of, such features or facilities. If the regulatory authority determines that it is necessary in order to minimize the potential for material damage to the features or facilities described above or to any aquifer or body of water that serves as a significant water source for any public water supply system, it may limit the percentage of coal extracted under or adjacent thereto.

(e) If subsidence causes material damage to any of the features or facilities covered by paragraph (d) of this section, the regulatory authority may suspend mining under or adjacent to such features or facilities until the subsidence control plan is modified to ensure prevention of further material damage to such features or facilities.

(f) The regulatory authority shall suspend underground mining activities under urbanized areas, cities, towns,

and communities, and adjacent to industrial or commercial buildings, major impoundments, or perennial streams, if imminent danger is found to inhabitants of the urbanized areas, cities, towns, or communities.

(g) Within a schedule approved by the regulatory authority, the operator shall submit a detailed plan of the underground workings. The detailed plan shall include maps and descriptions, as appropriate, of significant features of the underground mine, including the size, configuration, and approximate location of pillars and entries, extraction ratios, measure taken to prevent or minimize subsidence and related damage, areas of full extraction, and other information required by the regulatory authority. Upon request of the operator, information submitted with the detailed plan may be held as confidential, in accordance with the requirements of § 773.13(d) of this chapter.

[48 FR 24652, June 1, 1983, as amended at 60 FR 16749, Mar. 31, 1995]

EFFECTIVE DATE NOTE: At 64 FR 71653, Dec. 22, 1999, § 817.121, paragraphs (c)(4)(i) through (iv) were suspended effective Dec. 22, 1999.

§ 817.122 Subsidence control: Public notice.

At least 6 months prior to mining, or within that period if approved by the regulatory authority, the underground mine operator shall mail a notification to all owners and occupants of surface property and structures above the underground workings. The notification shall include, at a minimum, identification of specific areas in which mining will take place, dates that specific areas will be undermined, and the location or locations where the operator's subsidence control plan may be examined.

[48 FR 24652, June 1, 1983]

§ 817.131 Cessation of operations: Temporary.

(a) Each person who conducts underground mining activities shall effectively support and maintain all surface access openings to underground operations, and secure surface facilities in areas in which there are no current operations, but operations are to be resumed under an approved permit. Temporary

abandonment shall not relieve a person of his or her obligation to comply with any provisions of the approved permit.

(b) Before temporary cessation of mining and reclamation operations for a period of thirty days or more, or as soon as it is known that a temporary cessation will extend beyond 30 days, each person who conducts underground mining activities shall submit to the regulatory authority a notice of intention to cease or abandon operations. This notice shall include a statement of the exact number of surface acres and the horizontal and vertical extent of sub-surface strata which have been in the permit area prior to cessation or abandonment, the extent and kind of reclamation of surface area which will have been accomplished, and identification of the backfilling, regrading, revegetation, environmental monitoring, underground opening closures and water treatment activities that will continue during the temporary cessation.

§ 817.132 Cessation of operations: Permanent.

(a) The person who conducts underground mining activities shall close or backfill or otherwise permanently reclaim all affected areas, in accordance with this chapter and according to the permit approved by the regulatory authority.

(b) All surface equipment, structures, or other facilities not required for continued underground mining activities and monitoring, unless approved as suitable for the postmining land use or environmental monitoring, shall be removed and the affected lands reclaimed.

§ 817.133 Postmining land use.

(a) *General.* All disturbed areas shall be restored in a timely manner to conditions that are capable of supporting—

(1) The uses they were capable of supporting before any mining; or

(2) Higher or better uses.

(b) *Determining premining uses of land.* The premining uses of land to which the postmining land use is compared shall be those uses which the land previously supported, if the land has not been previously mined and has been